

SP-G1 – Effect of Project Operations on Geomorphic Processes Upstream of Oroville Dam

PROPOSED METHODOLOGY CHANGE

Summary

Access difficulties and safety considerations have prevented staff from classifying stream reaches above Lake Oroville. Stream reaches that are accessible and that are not dangerous have been classified. It is proposed that the classification for the remainder of the stream reaches be extrapolated as having the same ratio of habitat types as those portions that have been classified.

Existing Language in Study Plan

Task 1 – Obtain and Review Existing Resource Data

Subtask – Classify upstream reaches within the sphere of influence of the lake, using the Rosgen stream classification method. The reaches will be classified using Rosgen's Level I stream typing, then further classified using the Level II or higher classification based on channel form and substrate. The results of the stream classification and data collection will be presented on the river atlas and GIS system.

Proposed Language in Study Plan

Task 1 – Obtain and Review Existing Resource Data

Subtask – Classify upstream reaches within the sphere of influence of the lake, using the Rosgen stream classification method. The reaches will be classified using Rosgen's Level I stream typing, then further classified using the Level II or higher classification based on channel form and substrate. **Inaccessible stream reaches will be classified by extrapolating data from adjacent accessible reaches that have similar geologic characteristics and similar stream profiles.** The results of the stream classification and data collection will be presented on the river atlas and GIS system.

Rationale For Methodology Change

The West Branch was planned to be typed from the reservoir full pool level (i.e. 900' elevation) upstream approximately nine miles to the first generally recognized fish barrier, Miocene Dam. We have typed portions of the West Branch from downstream of Jordan Hill Road to approximately 3000 feet downstream of Miocene Dam. In addition, approximately 4000 feet of stream reach was typed upstream and downstream of the Evan Road access point about three miles downstream of Miocene Dam. Approximately 1500 feet of stream reach was typed from the 900' elevation upstream until the side slopes steepened and made further progress impossible. An attempt was made by staff to swim and scramble further upstream, but was considered too difficult and unsafe for a three-person survey crew.

Geologic characteristics along the West Branch from Miocene Dam downstream to Lake Oroville remain consistent. The stream channel lies in a deeply incised channel with bedrock composed of metavolcanic and metasedimentary rock. The stream profile from Miocene Dam to Lake Oroville remains fairly consistent at about 70 feet per mile.

The Middle Fork was planned to be typed from the 900' elevation upstream 2.9 miles to the first recognized fish barrier, Curtain Falls. We have typed approximately 3800' from the 900' elevation upstream until the steep side slopes prevented further upstream access. Staff attempted to swim further upstream but continuing the effort was considered too dangerous. The remaining stream reaches up to Curtain Falls were classified based Digital Orthorectified Quarter Quads (DOQQs) from Evans Bar upstream to Curtain Falls and from aerial photos (flown in 1999) from Evans Bar downstream to Lake Oroville.

Geologic characteristics along the Middle Fork from Curtain Falls downstream to Lake Oroville remain consistent. The stream channel lies in a very deeply incised channel with granite bedrock. Stream banks often steepen to near vertical; access can only be achieved floating in the river. The stream profile from Curtain Falls to Lake Oroville remains fairly consistent at about 100 feet per mile.